

109TH CONGRESS  
1ST SESSION

# H. R. 1215

To provide for the implementation of a Green Chemistry Research and Development Program, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

MARCH 10, 2005

Mr. GINGREY (for himself, Mr. MARSHALL, Mr. EHLERS, Mr. BOEHLERT, Mr. FILNER, Mr. ROHRABACHER, Mr. MCHUGH, Mr. HASTINGS of Washington, and Mr. SIMMONS) introduced the following bill; which was referred to the Committee on Science

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## A BILL

To provide for the implementation of a Green Chemistry Research and Development Program, and for other purposes.

1       *Be it enacted by the Senate and House of Representa-*  
2       *tives of the United States of America in Congress assembled,*

3       **SECTION 1. SHORT TITLE.**

4       This Act may be cited as the “Green Chemistry Re-  
5       search and Development Act of 2005”.

6       **SEC. 2. DEFINITIONS.**

7       In this Act—

8               (1) the term “green chemistry” means chem-  
9       istry and chemical engineering to design chemical

1 products and processes that reduce or eliminate the  
2 use or generation of hazardous substances while pro-  
3 ducing high quality products through safe and effi-  
4 cient manufacturing processes;

5 (2) the term “Interagency Working Group”  
6 means the interagency working group established  
7 under section 3(c); and

8 (3) the term “Program” means the Green  
9 Chemistry Research and Development Program de-  
10 scribed in section 3.

11 **SEC. 3. GREEN CHEMISTRY RESEARCH AND DEVELOPMENT**  
12 **PROGRAM.**

13 (a) IN GENERAL.—The President shall establish a  
14 Green Chemistry Research and Development Program to  
15 promote and coordinate Federal green chemistry research,  
16 development, demonstration, education, and technology  
17 transfer activities.

18 (b) PROGRAM ACTIVITIES.—The activities of the Pro-  
19 gram shall be designed to—

20 (1) provide sustained support for green chem-  
21 istry research, development, demonstration, edu-  
22 cation, and technology transfer through—

23 (A) merit-reviewed competitive grants to  
24 individual investigators and teams of investiga-

1           tors, including, to the extent practicable, young  
2           investigators, for research and development;

3                 (B) grants to fund collaborative research  
4           and development partnerships among univer-  
5           sities, industry, and nonprofit organizations;

6                 (C) green chemistry research, development,  
7           demonstration, and technology transfer con-  
8           ducted at Federal laboratories; and

9                 (D) to the extent practicable, encourage-  
10          ment of consideration of green chemistry in—

11                     (i) the conduct of Federal chemical  
12           science and engineering research and de-  
13           velopment; and

14                     (ii) the solicitation and evaluation of  
15           all proposals for chemical science and engi-  
16           neering research and development;

17                 (2) examine methods by which the Federal Gov-  
18           ernment can create incentives for consideration and  
19           use of green chemistry processes and products;

20                 (3) facilitate the adoption of green chemistry  
21           innovations;

22                 (4) expand education and training of under-  
23           graduate and graduate students, and professional  
24           chemists and chemical engineers, including through

1 partnerships with industry, in green chemistry  
2 science and engineering;

3 (5) collect and disseminate information on  
4 green chemistry research, development, and tech-  
5 nology transfer, including information on—

6 (A) incentives and impediments to develop-  
7 ment and commercialization;

8 (B) accomplishments;

9 (C) best practices; and

10 (D) costs and benefits;

11 (6) provide venues for outreach and dissemina-  
12 tion of green chemistry advances such as symposia,  
13 forums, conferences, and written materials in col-  
14 laboration with, as appropriate, industry, academia,  
15 scientific and professional societies, and other rel-  
16 evant groups;

17 (7) support economic, legal, and other appro-  
18 priate social science research to identify barriers to  
19 commercialization and methods to advance commer-  
20 cialization of green chemistry; and

21 (8) provide for public input and outreach to be  
22 integrated into the Program by the convening of  
23 public discussions, through mechanisms such as cit-  
24 izen panels, consensus conferences, and educational  
25 events, as appropriate.

1       (c) INTERAGENCY WORKING GROUP.—The President  
2 shall establish an Interagency Working Group, which shall  
3 include representatives from the National Science Founda-  
4 tion, the National Institute of Standards and Technology,  
5 the Department of Energy, the Environmental Protection  
6 Agency, and any other agency that the President may des-  
7 ignate. The Director of the National Science Foundation  
8 and the Assistant Administrator for Research and Devel-  
9 opment of the Environmental Protection Agency shall  
10 serve as co-chairs of the Interagency Working Group. The  
11 Interagency Working Group shall oversee the planning,  
12 management, and coordination of the Program. The Inter-  
13 agency Working Group shall—

14           (1) establish goals and priorities for the Pro-  
15 gram, to the extent practicable in consultation with  
16 green chemistry researchers and potential end-users  
17 of green chemistry products and processes; and

18           (2) provide for interagency coordination, includ-  
19 ing budget coordination, of activities under the Pro-  
20 gram.

21       (d) AGENCY BUDGET REQUESTS.—Each Federal  
22 agency and department participating in the Program  
23 shall, as part of its annual request for appropriations to  
24 the Office of Management and Budget, submit a report  
25 to the Office of Management and Budget which identifies

1 its activities that contribute directly to the Program and  
2 states the portion of its request for appropriations that  
3 is allocated to those activities. The President shall include  
4 in his annual budget request to Congress a statement of  
5 the portion of each agency's or department's annual budg-  
6 et request allocated to its activities undertaken pursuant  
7 to the Program.

8 (e) REPORT TO CONGRESS.—Not later than 2 years  
9 after the date of enactment of this Act, the Interagency  
10 Working Group shall transmit a report to the Committee  
11 on Science of the House of Representatives and the Com-  
12 mittee on Commerce, Science, and Transportation of the  
13 Senate. This report shall include—

14 (1) a summary of federally funded green chem-  
15 istry research, development, demonstration, edu-  
16 cation, and technology transfer activities, including  
17 the green chemistry budget for each of these activi-  
18 ties; and

19 (2) an analysis of the progress made toward  
20 achieving the goals and priorities for the Program,  
21 and recommendations for future program activities.

22 **SEC. 4. MANUFACTURING EXTENSION CENTER GREEN SUP-**  
23 **PLIERS NETWORK GRANT PROGRAM.**

24 Section 25(a) of the National Institute of Standards  
25 and Technology Act (15 U.S.C. 278k(a)) is amended—

1 (1) by striking “and” at the end of paragraph  
2 (4);

3 (2) by striking the period at the end of para-  
4 graph (5) and inserting “; and”; and

5 (3) by adding at the end the following:

6 “(6) the enabling of supply chain manufactur-  
7 ers to continuously improve products and processes,  
8 increase energy efficiency, identify cost-saving oppor-  
9 tunities, and optimize resources and technologies  
10 with the aim of reducing or eliminating the use or  
11 generation of hazardous substances.”.

12 **SEC. 5. UNDERGRADUATE EDUCATION IN CHEMISTRY AND**  
13 **CHEMICAL ENGINEERING.**

14 (a) PROGRAM AUTHORIZED.—(1) As part of the Pro-  
15 gram activities under section 3(b)(4), the Director of the  
16 National Science Foundation shall carry out a program  
17 to award grants to institutions of higher education to sup-  
18 port efforts by such institutions to revise their under-  
19 graduate curriculum in chemistry and chemical engineer-  
20 ing to incorporate green chemistry concepts and strate-  
21 gies.

22 (2) Grants shall be awarded under this section on a  
23 competitive, merit-reviewed basis and shall require cost  
24 sharing in cash from non-Federal sources, to match the  
25 Federal funding.

1 (b) SELECTION PROCESS.—(1) An institution of  
2 higher education seeking funding under this section shall  
3 submit an application to the Director at such time, in such  
4 manner, and containing such information as the Director  
5 may require. The application shall include at a min-  
6 imum—

7 (A) a description of the content and schedule  
8 for adoption of the proposed curricular revisions to  
9 the courses of study offered by the applicant in  
10 chemistry and chemical engineering; and

11 (B) a description of the source and amount of  
12 cost sharing to be provided.

13 (2) In evaluating the applications submitted under  
14 paragraph (1), the Director shall consider, at a min-  
15 imum—

16 (A) the level of commitment demonstrated by  
17 the applicant in carrying out and sustaining lasting  
18 curriculum changes in accordance with subsection  
19 (a)(1); and

20 (B) the amount of cost sharing to be provided.

21 (c) AUTHORIZATION OF APPROPRIATIONS.—In addi-  
22 tion to amounts authorized under section 8, from sums  
23 otherwise authorized to be appropriated by the National  
24 Science Foundation Authorization Act of 2002, there are  
25 authorized to be appropriated to the National Science

1 Foundation for carrying out this section \$7,000,000 for  
2 fiscal year 2006, \$7,500,000 for fiscal year 2007, and  
3 \$8,000,000 for fiscal year 2008.

4 **SEC. 6. STUDY ON COMMERCIALIZATION OF GREEN CHEM-**  
5 **ISTRY.**

6 (a) STUDY.—The Director of the National Science  
7 Foundation shall enter into an arrangement with the Na-  
8 tional Research Council to conduct a study of the factors  
9 that constitute barriers to the successful commercial appli-  
10 cation of promising results from green chemistry research  
11 and development.

12 (b) CONTENTS.—The study shall—

13 (1) examine successful and unsuccessful at-  
14 tempts at commercialization of green chemistry in  
15 the United States and abroad; and

16 (2) recommend research areas and priorities  
17 and public policy options that would help to over-  
18 come identified barriers to commercialization.

19 (c) REPORT.—The Director shall submit a report to  
20 the Committee on Science of the House of Representatives  
21 and the Committee on Commerce, Science, and Transpor-  
22 tation of the Senate on the findings and recommendations  
23 of the study within 18 months after the date of enactment  
24 of this Act.

1 **SEC. 7. AUTHORIZATION OF APPROPRIATIONS.**

2 (a) NATIONAL SCIENCE FOUNDATION.—(1) From  
3 sums otherwise authorized to be appropriated by the Na-  
4 tional Science Foundation Authorization Act of 2002,  
5 there are authorized to be appropriated to the National  
6 Science Foundation for carrying out this Act—

7 (A) \$7,000,000 for fiscal year 2006;

8 (B) \$7,500,000 for fiscal year 2007; and

9 (C) \$8,000,000 for fiscal year 2008.

10 (2) The sums authorized by paragraph (1) are in ad-  
11 dition to any funds the National Science Foundation is  
12 spending on green chemistry through its ongoing chem-  
13 istry and chemical engineering programs.

14 (b) NATIONAL INSTITUTE OF STANDARDS AND  
15 TECHNOLOGY.—From sums otherwise authorized to be  
16 appropriated, there are authorized to be appropriated to  
17 the National Institute of Standards and Technology for  
18 carrying out this Act—

19 (1) \$5,000,000 for fiscal year 2006;

20 (2) \$5,500,000 for fiscal year 2007; and

21 (3) \$6,000,000 for fiscal year 2008.

22 (c) DEPARTMENT OF ENERGY.—From sums other-  
23 wise authorized to be appropriated, there are authorized  
24 to be appropriated to the Department of Energy for car-  
25 rying out this Act—

26 (1) \$7,000,000 for fiscal year 2006;

1           (2) \$7,500,000 for fiscal year 2007; and

2           (3) \$8,000,000 for fiscal year 2008.

3       (d) ENVIRONMENTAL PROTECTION AGENCY.—From  
4 sums otherwise authorized to be appropriated, there are  
5 authorized to be appropriated to the Environmental Pro-  
6 tection Agency for carrying out this Act—

7           (1) \$7,000,000 for fiscal year 2006;

8           (2) \$7,500,000 for fiscal year 2007; and

9           (3) \$8,000,000 for fiscal year 2008.

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